

REMARKS/ARGUMENTS

Claims 1-35, 49 and 50 are active in this application. The claims have been amended for clarity. Support for Claims 49 and 50 is found in Claim 1 and the specification as originally filed. No new matter is added.

The rejection of Claims 1-28 and 31-33 under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) over Degnan et al. (U.S. Patent No. 5,378,352) is traversed.

As duly noted by the Examiner, US '352 does not describe the amount of FER zeolite ranging from 5 to 30% by weight with respect to the total weight of the catalyst as claimed (see subpart A of Claim 1 and page 5 of the Official Action). Therefore, US '352 does not anticipate the present claims.

The present claims would not have been obvious in light of US '352 because US '352 does not describe the process for desulfurizing hydrocarbons which boil within the range of 35 to 250°C containing olefins in more than 150 ppm of sulfur by contacting the hydrocarbons with a catalyst, which the catalyst is defined in Claim 1.

US '352 describes process for desulfurizing gasoline using a zeolite type catalyst material such as ZSM 35 and MCM-22 (see col. 6, lines 35-39). In column 8, Table 1, US '352 describes that the catalyst contains 65 by wt% of MCM-22 and 35 wt% of aluminum. However, there is no description for alternative amounts of zeolite in the catalyst nor is there a suggestion to alter this amount of zeolite to range from 5 to 30 % by weight with respect to the total weight of the catalyst as claimed. As a result, a *prima facie* case of obviousness does not exist.

In any case, Applicants have presented data in the specification and additional data in the attached Rule 132 declaration which demonstrates the importance of employing a catalyst with an FER zeolite in the amount of from 5 to 30% by weight with respect to the total weight of the catalyst (see page 1, paragraph 6 of the Declaration).

The data in the specification is summarized on page 4, paragraphs 15 through 17 of the declaration. The data demonstrate that the catalyst which meet the limitations of the present claims have superior RON and MON relative to catalysts prepared according to the description in US '352. US '352 does not suggest such improvements to RON and MON when using a catalyst as claimed in the present application.

Therefore, Applicants request withdrawal of this ground of rejection.

The rejection of Claims 1-35 under 35 U.S.C. § 103(a) over EP 0665280 is respectfully traversed. First, it is noted this rejection appears to be a combination of the EP '280 and US '352 discussed above (see page 7, paragraph 3 of the Official Action).

As already noted by the Examiner, EP '280 does not describe several features of the Applicants' invention (page 7 of the Official Action).

EP '280 discloses a process for producing a catalyst for hydrodesulfurization of hydrocarbon oils and a desulfurization process of gas oil using this catalyst. The catalyst described in EP '280 contains an inorganic oxide carrier, e.g., alumina, containing 1 to 20% by weight of a crystalline aluminosilicate, which can also be a zeolite of the Y type of ZSM (page 4, lines 26-31). The carrier also incorporates a Group VI metal component, a Group VIII metal component, e.g. cobalt and molybdenum, and 1 to 15% by weight of phosphorous.

EP '280 does not describe an FER zeolite containing catalyst. Notwithstanding this deficiency, the Office has taken the position that one would have substituted the ZSM-35 from US '352 into the process of EP '280. However, there in fact is no support for such a substitution in the references themselves nor has the Examiner provided any evidence that one would have made such a substitution in light of the knowledge available in the art. As a result a *prima facie* case of obviousness does not exist.

In any case, Applicants have provided data and a declaration explaining these and other data, which demonstrate the superiority of employing a catalyst with as claimed herein relative to the catalyst employed in US '352.

Withdrawal of this ground of rejection is respectfully requested.

The rejection of Claims 1-28 and 31-35 under 35 U.S.C. § 103(a) over Collins et al. (U.S. Patent No. 5,482,617) is respectfully traversed.

US '617 describe a process for desulfurizing a hydrocarbon stream using catalyst such as zeolite catalysts (see col. 4, lines 18-25). A specific requirement of the process described in US '617 is that the desulfurization occurs without added hydrogen (see col. 1, line 13 and col. 2, lines 32-33).

However, the presently claimed process is performed in the presence of hydrogen (see line 4 of Claim 1).

One simply would not have added hydrogen to the reaction of US '617 based on the expressed teachings of the process--see MPEP § 2141.02: "Prior art must be considered in its entirety, including disclosures that can teach away from the claims."

Therefore, withdrawal of this ground of rejection is requested.

Applicants note that an abstract was filed with this application as page 66 of the specification filed on April 6, 2001. A copy of that abstract is attached for the Patent Office's records.

The objections to the claims have been addressed by amendment.

The rejection of Claims 1-35 under 35 U.S.C. § 112, second paragraph have been addressed by amendment.

Applicants also request the Examiner return signed and dated copies of the PTO Form 1449 filed as Information Disclosure Statements on May 16, 2001 and August 15, 2002. Copies of these filings are attached for convenience.

Finally, Applicants request that this application be passed to issuance.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Attorney of Record
Registration No. 24,618

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220

Daniel J. Pereira, Ph.D.
Registration No. 45,518